

CLAIMS

1. An inspection object silicon wafer for the purpose of detecting crystal defects characterized in that epitaxial growth is made on the surface of a mirror surface wafer which the natural oxide film is removed of without surface defects being eliminated to make the crystal defects having pits and projections appear on the surface of the epitaxial layer.
2. An inspection object silicon wafer for the purpose of detecting crystal defects manufactured through a process of heat treatment in which the natural oxide film is removed without the surface defects of a mirror surface wafer being eliminated and a process of epitaxial growth in which epitaxial growth is made on the surface of the mirror surface wafer and the crystal defects are generated as defects having pits and projection on the surface of the epitaxial layer.
3. An inspection object silicon wafer for the purpose of detecting crystal defects according to claim 2 characterized in that the heat treatment process and epitaxial deposition process are performed under a hydrogen atmosphere of normal pressure at temperatures conditions of between 900 °C and 1080 °C.
4. A method of detecting crystal defects of a silicon wafer characterized in that; by making epitaxial growth on the surface of the silicon wafer heat-treated in a temperature condition in which the natural oxide film is removed but the surface state of the silicon wafer is preserved, crystal defects having pits and projections are made to appear on the surface of the epitaxial layer; and the crystal defects having pits and projections are detected by a light scattering particle inspection apparatus.

5. A method of detecting crystal defects of a silicon wafer according to claim 4 characterized in that, the heat treatment and the growth of epitaxial layer are performed under a hydrogen atmosphere of ordinary atmosphere at a temperature between 900 °C and 1080 °C.

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